SANTA CRUZ BIOTECHNOLOGY, INC.

LCAT (K-15): sc-47900

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The lipase gene family belongs to one of the most robust genetic superfamilies found in living organisms, which includes esterases and thioesterases. Members of the AB hydrolase subfamily include hepatic lipase (HL), endothelial lipase (EL), lipoprotein lipase (LPL), pancreatic lipase (PL), gastric lipase (GL) and the lecithin-cholesterol acyltransferase (LCAT). These family members play a crucial role in the metabolism of lipids. LCAT esterifies cholesterol, which is required for cholesterol transport. LCAT deficiency has been implicated in fish-eye disease, a rare genetic disorder of high density lipoprotein (HDL) metabolism.

REFERENCES

1. McIntyre N. 1988. Familial LCAT deficiency and fish-eye disease. J. Inherit Metab. Dis. 1: 45-56.
2. Teh, E.M., Chisholm, J.W., Dolphin, P.J., Pouliquen, Y., Savoldelli, M., de Gennes, J.L. and Benlian, P. 1999. Classical LCAT deficiency resulting from a novel homozygous dinucleotide deletion in exon 4 of the human lecithin: cholesterol acyltransferase gene causing a frameshift and stop codon at residue 144. Atherosclerosis 46: 141-151.
3. Huesca-Gomez, C., Carreon-Torres, E., Nepomuceno-Mejia, T., Sanchez-Solorio, M., Galicia-Hidalgo, M., Mejia, A.M., Montano, L.F., Franco, M., Posadas-Romero, C. and Perez-Mendez, O. 2004. Contribution of cholesteryl ester transfer protein and lecithin:cholesterol acyltransferase to HDL size distribution. Endocr. Res. 30: 403-415.
4. Nakamura, Y., Kotite, L., Gan, Y., Spencer, T.A., Fielding, C.J. and Fielding, P.E. 2004. Molecular mechanism of reverse cholesterol transport: reaction of pre-β-migrating high-density lipoprotein with plasma lecithin/cholesterol acyltransferase. Biochemistry 43: 14811-14720.
5. Miida, T., Zhang, B., Obayashi, K., Seino, U., Zhu, Y., Ito, T., Nakamura, Y., Okada, M. and Saku, K. 2004. T13M mutation of lecithin-cholesterol acyltransferase gene causes fish-eye disease. Clin. Chim. Acta 343: 201-208.

CHROMOSOMAL LOCATION

Genetic locus: LCAT (human) mapping to 16q22.1; Lcat (mouse) mapping to 8 D3.

SOURCE

LCAT (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LCAT of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47900 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

LCAT (K-15) is recommended for detection of mature LCAT and LCAT precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LCAT siRNA (h): sc-60926, LCAT siRNA (m): sc-60927, LCAT shRNA Plasmid (h): sc-60926-SH, LCAT shRNA Plasmid (m): sc-60927-SH, LCAT shRNA (h) Lentiviral Particles: sc-60926-V and LCAT shRNA (m) Lentiviral Particles: sc-60927-V.

Molecular Weight of LCAT: 67 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **LCAT (D-2): sc-376682** or **LCAT (B-4): sc-398361**, our highly recommended monoclonal alternatives to LCAT (K-15).